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09/779,939	02/09/2001	Bob Tang	012.P57001	4135

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BERKELEY LAW & TECHNOLOGY GROUP, LLP  
17933 NW Evergreen Parkway, Suite 250  
BEAVERTON, OR 97006

EXAMINER
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SHAH, CHIRAG G

ART UNIT	PAPER NUMBER
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2616

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11/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/779,939

Applicant(s)

TANG, BOB

Examiner

Chirag G. Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 3 objected to because of the following informalities: Claim 3 recites limitation “capable of”. Under MPEP 2106, page 2100-8, “language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Howe (U.S. 6,611,519) in view of Piirainen et al. (U.S. Patent No. 6,763,010), hereinafter referred as Piirainen.

Regarding claim 1, Howe discloses in **fig. 7** of a method comprising:

pre-arranging between a source and a **destination [source 1 and destination 5, see fig. 7]** one or more Internet connected nodes to transmit a signal from a first node to a second node without a buffering delay and/or a route computation delay for at least one or more predetermined time periods [see **col. 6, lines 17-47 and fig. 7, where the source 1 transmits**

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**and switches its information directly across the network, on a predetermined, precisely scheduled "path", with no buffering and no delays],**

establishing a connection between the source and the destination along the pre-arranged one or more internet connected nodes[**predetermined precisely scheduled path between source 1 and destination 5 via links, see fig. 7 and col. 6, lines 17-47]**, at least in part, to enable bi-directional data communication between the source and destination [**source 1 to destination 5, see fig. 7]**;

wherein a particular one of the one or more predetermined time periods is determined based at least in part on a transmission link bandwidth of a particular node [**see col. 37, lines 30-37, where the layer one switch of figure 7 may operate at DS-1 of 1.54Mbps or 1 Gbps]** as claim.

Howe discloses of in paragraph 0857 and claim 1 of transmitting the information signal(s) along the transmission connection path, however *fails to explicitly disclose of interleaving one or more signals and transmitting the interleaved one or more signals along the connection.*

Piirainen teaches of in fig. 4 of a transceiver comprising a multiplexing means and an interleaving means. Piirainen discloses in the abstract and in col. 3, lines 52 to col. 4, lines 43 of a transceiver interleaving the bits of the channel-coded signal into blocks of a predetermined size and transmitting the interleaved signal(s) as a communication signal transmission burst in a time slot over the connection. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection

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as taught by Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

Regarding claim 3, Howe disclose in **fig. 7** of a system comprising:

a virtual dedicated communication path comprising one or more Internet connected nodes **[source 1 transmits and switches its information directly across the network on a predetermined precisely scheduled path, see col. 6, lines 17-47 and fig. 7]**, wherein the one or more nodes are capable of being pre-arranged for one or more periods of time **[a node is pre-arranged for predetermined precisely scheduled path, see col. 6, lines 17-47]**, to transmit a signal from a first node to a second node without a buffering delay and/or a route calculation delay **[see col. 6, lines 17-47 and fig. 7, where the source 1 transmits and switches its information directly a across the network, on a predetermined, precisely scheduled “path”, with no buffering and no delays]**,

wherein a particular one of said one or more respective periods of time is determined based at least in part on a transmission link bandwidth of a particular one of the one or more nodes **[see col. 37, lines 30-37, where the layer one switch of figure 7 may operate at DS-1 of 1.54Mbps or 1 Gbps]** as claim.

Howe discloses of in paragraph 0857 and claim 1 of transmitting the information signal(s) along the transmission connection path, however *fails to explicitly disclose of wherein the signal comprises one or more multiplexed signals from the source and/or the destination..*

Piirainen teaches of in fig. 4 of a transceiver comprising a multiplexing means and an interleaving means. Piirainen discloses in the abstract and in col. 3, lines 52 to col. 4, lines 43

that the signal blocks formed by the interleaving means are supplied to the multiplexing means, which multiplex at least two 114 bit signal blocks that have been interleaved by the interleaving means for transmission in the same burst over the connection. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection as taught by Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

Regarding claim 6, Howe discloses in **figs. 12 and 13** of a system comprising:

a connection manager [**time scheduled controller 120, see fig. 12 and 13**] capable of connecting a source and a destination at least in part by designating one or more Internet Connected nodes for transmitting a signal from a first node to a second node without a buffering delay and/or a route calculation delay, at least in part by designating the one or more nodes for transmitting said signal for one or more periods of time [**see col. 6, lines 17-47 and fig. 7, where the source 1 transmits and switches its information directly across the network, on a predetermined, precisely scheduled "path", with no buffering and no delays**], wherein a particular one or the one or more periods of time is determined based at least in part on a transmission link bandwidth of a particular one of the one or more nodes [**see col. 37, lines 30-37, where the layer one switch of figure 7 may operate at DS-1 of 1.54Mbps or 1 Gbps**].

Howe discloses in paragraph 0857 and claim 1 of transmitting the information signal(s) along the transmission connection path, however *fails to explicitly disclose of wherein the signal comprises one or more multiplexed signals from the source and/or the destination.*

Piirainen teaches of in fig. 4 of a transceiver comprising a multiplexing means and an interleaving means. Piirainen discloses in the abstract and in col. 3, lines 52 to col. 4, lines 43 that the signal blocks formed by the interleaving means are supplied to the multiplexing means, which multiplex at least two 114 bit signal blocks that have been interleaved by the interleaving means for transmission in the same burst over the connection. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection as taught by Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

Regarding claims 4, 7 and 11, Howe discloses wherein the virtual dedicated communication path comprises a first unidirectional virtual dedicated circuit and a second unidirectional virtual dedicated circuit [see fig. 7, where a first unidirectional circuit and a second unidirectional circuits are present].

Regarding claims 5 and 8, Howe discloses wherein at least one of the unidirectional virtual dedicated circuits is active for a period of time [see col. 6, lines 17-47 and fig. 7, where **the source 1 transmits and switches its information directly across the network, on a predetermined, specified precise scheduled time**].

Regarding claim 9, Howe fails to disclose wherein the signal further comprises multiplexed data from another source at one or more of the designated one or more nodes from

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another source at one or more of the designated one or more nodes. Piirainen disclose wherein the signal further comprises multiplexed data [at least two 114-bit signal, see col. 3, lines 60 to col. 4, lines 9] from another source at one or more of the designated one or more nodes [antenna receives speech signal from another source (another source is inherent since the transceiver includes an antenna for receiving a speech signal), see fig. 1 and col. 3, lines 53 to col. 4, lines 9]. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection as taught by Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

Regarding claim 10, Howe fails to disclose of further comprising interleaving data from another source at one or more of the pre-arranged nodes. Piirainen teaches of in fig. 4 of a transceiver comprising a multiplexing means and an interleaving means. Piirainen discloses in the abstract and in col. 3, lines 52 to col. 4, lines 43 that the signal blocks formed by the interleaving means are supplied to the multiplexing means for multiplexing the interleaved blocks, which multiplex at least two 114 bit signal blocks that have been interleaved by the interleaving means for transmission in the same burst over the connection received from speech source node. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection as taught by



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Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

Regarding claim 12, Howe fails to disclose the signal further further comprises multiplexed data from another source at one or more of the designated one or more pre-arranged nodes. Piirainen disclose wherein the signal further further comprises multiplexed data [at least two 114-bit signal, see col. 3, lines 60 to col. 4, lines 9] from another source at one or more of the designated one or more pre-arranged nodes [antenna in the pre-arranged transceiver receives speech signal from another source (another source is inherent since the transceiver includes an antenna for receiving a speech signal), see fig. 1 and col. 3, lines 53 to col. 4, lines 9].

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Howe to include the interleaving and multiplexing signals prior to transmission over the pre-established connection as taught by Piirainen. One is motivated as such in order to increase the transmission speed of the communication signal and the number of the connections.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1 and 3-12 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patel Jay can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cgs  
October 29, 2007



Chirag G. Shah  
Primary Patent Examiner, 2616

CHIRAG G. SHAH  
PRIMARY PATENT EXAMINER